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OF NOETIC STABILITY; AND BELIEF

I

IN preceding articles of this series[1] we have seen reason to hold (1) that what I have called the field of inattention, which in any moment stands contrasted with the field of attention, is the same as, and identical with, the Self to which the presentations within the field of attention are given; (2) that the Self and the presentations to the Self are fundamentally of the same nature; and (3) that, being systemically related, the fields of inattention and of attention—*i. e.*, the Self and the presentations to the Self—are always reciprocally efficient. In this article I shall ask the reader to consider a corollary of this view.

Sec. 1.—If we are warranted in holding that the condition of activity within the nervous system of a man, in any moment, is adequately symbolized by the wave surface of a liquid upon which a wave pattern appears, and if we consider any given neururgic pattern in itself, then what we have called the neururgic emphasis in the neururgic pattern must display a certain measure of stability. The emphasis may be in perfect harmony with the neururgic system as a whole, if we may so speak; in which case no obstruction to its development will occur. Or it may be so utterly out of harmony with the neururgic system that its stability can not be maintained. Between the maximum and the minimum of stability an indefinite number of gradations may appear; but each neururgic emphasis must display a more or less of stability.

Sec. 2.—If, then, our theory of a thoroughgoing neururgic and noetic correspondence is valid, we may say that in a given noetic pattern, any noetic emphasis must display a certain measure of stability, which may vary indefinitely, from a maximum of what we may call complete stability to a minimum of what we may call complete instability.

[1] 'Of the Field of Inattention—The Self,' JOURNAL, July 21, and 'Of Conscious Efficiency,' JOURNAL, August 4.

It is this measure of stability which constitutes what I call the realness of the noetic emphasis or presentation. The noetic emphasis may be in perfect harmony with the noetic system as a whole; in which case no obstruction to its development will occur: then it has a maximum of realness. Or it may be so utterly out of harmony with the noetic system that its realness can not be maintained for a moment. Between the maximum and the minimum of noetic stability, or realness, an indefinite number of gradations may appear; but each noetic emphasis must display a more or less of this stability, or realness in relation to any given noetic pattern.

It is the recognition of the establishment of the realness of a given noetic emphasis which constitutes the experience which we call Belief.

Sec. 3.—The stability of a neururgic emphasis must always be determined by two factors: (1) what we may call the inner efficiency of the emphasis itself, which is for the most part determined by the forcefulness of environmental stimuli or of the resultants of such stimuli; and (2) the nature of the sum total of the activities of the mass of the whole nervous system as exclusive of the emphasis.

At times a careless view might lead us to think that the stability of a given neururgic emphasis is given solely by its own inner efficiency; but evidently this can never be actually true, if it is true that there is a thoroughgoing reciprocity of efficiency between all parts of the neururgic system. There must, if we may so speak, always be some measure of welcome, or rejection, of the emphasis by the rest of the neururgic system even when this is overlooked; and it would thus appear that the undifferentiable mass of unemphatic nervous activities always plays its part in determining the measure of stability displayed by a given neururgic emphasis.

In certain cases we should expect to note the appearance of incompatible neururgic emphases, the development of one of which would necessarily exclude the development of the other.

At times this incompatibility might result in a failure of the development of either of the two incompatible emphases, and a loss of stability in both. Or this deadlock might be broken in one of two ways: (1) by an increase of the inner efficiency of one of the incompatible emphases; or (2) by the process of the welcome of one, and the rejection of the other, by the unemphatic part of the neururgic system taken as a whole.

Sec. 4.—Correspondingly the realness of a noetic emphasis must always be determined by two factors: (1) by the inner efficiency of the noetic emphasis itself; and (2) by the nature of the whole noetic system as apart from the emphasis, that is by the nature of the field of inattention—*i. e.*, in our view, by the nature of the Self.

At times, a careless consideration might lead us to think that the

realness of a given noetic emphasis is given solely by its own inner efficiency; but clearly this can never be actually true. There must always be some measure of welcome, or rejection, of the noetic emphasis by the Self. It would thus appear that the Self always plays its part in determining the measure of realness displayed by a given noetic emphasis.

In certain cases we should expect to note the occurrence of incompatible noetic emphases, the development of one of which would necessarily exclude the development of the other.

At times this incompatibility might result in a failure of the development of either of the two incompatible noetic emphases, and a loss of realness in both. This we experience in cases of what we call persistent doubt.

Or this deadlock of doubt might be broken in one of two ways: (1) by an increase of the inner efficiency of one of the two incompatible noetic emphases; in which case psychic emphases would arise which would appear to be efficient in the establishment of the realness in one of the two incompatible noetic emphases, and the loss of realness in the other; or (2) by the process of welcome of one, and rejection of the other of the two incompatibles by the unemphatic part of the noetic system taken as a whole—*i. e.*, by the Self. When this process of welcome and rejection becomes explicit in a state of self-consciousness, then we experience Belief. Then the empirical ego—the simulacrum of the Self—appears as welcoming the one and rejecting the other; as establishing the realness of one, as determining the relative unrealness of the other. Thus, when we believe, we will to believe.

Sec. 5.—We thus find ourselves considering the problem which aroused so much discussion a few years ago in connection with Professor James's fascinating essays in his 'Will to Believe.' It is needless to say that the development of my thought in reference to this problem is due largely to Professor James's influence; nevertheless, although my view can scarcely be said to be opposed to his in any sense, yet it differs from his in some particulars which seem to me to have importance in the fact that they clear away certain obscurities which have led to the differences between him and his critics.[2]

As I understand Professor James, he holds: (1) that in some cases we are able to believe by an effort of will; and (2) that under certain conditions we are justified in doing so.

[2] I must refer the reader to an article on 'Belief and Will,' published in the *International Journal of Ethics* for April, 1899, for a fuller statement of my position than can be given here.

We are here dealing with two separate questions. The first is a question of psychological fact; the second is a question of ethical significance. I shall consider these two questions separately.

II

Sec. 6.—First as to the question of psychological fact. In relation to this I go beyond Professor James's position in maintaining that we never believe without willing to believe, and this I shall attempt to show in the sequel.

Those critics of Professor James's teaching who question whether we ever can will to believe must of course feel a still stronger repulsion to the doctrine I have thus baldly stated. They tell us that it is clear in a large number of cases, which can be studied in detail, that beliefs are forced upon us by forces extraneous to us—by environmental influences, by custom, by tradition; and they argue, therefore, that belief must always be thus determined for us.

Waiving for the moment the question of fact, it is worth noting that we are in the habit of speaking of conditions which involve noetic stability or realness, when viewed quite objectively, as beliefs; whereas they are merely conditions which may induce the subjective state called belief. Thus we are wont to say, for instance, that the common man believes in the reality of objects in the outer world, and this because he acts as he would if he entertained such a belief. But in fact nothing is clearer than that the average thoughtless man knows nothing whatever of such a belief; he is, in fact, hardly able to comprehend what the psychologist means when he distinguishes between the subjective and the objective, and is entirely incapable of understanding the significance of the ontological questions with which the metaphysician concerns himself.

Now, in my view, the influences extraneous to us, custom, tradition, etc. (which we sometimes carelessly describe in objective terms as beliefs), are what I have spoken of above as conditions of noetic realness, and do not necessarily involve the subjective experience of belief at all.

I would not be understood to underestimate the importance of these special influences in the establishment of realness, the recognition of which, under certain conditions, involves belief. But I would hold that this realness itself must always be in part due to the influence of the Self, although in certain cases this influence may easily be overlooked. The cases where this realness seems to be forced upon us are quite comparable with the cases of what is called passive or involuntary attention, considered in the preceding article of this series, where attention seems to be forced upon us from without.

As we saw there, the absence of the efficiency of the Self in such cases is altogether illusory, and the same is true in the case before us.

But this realness of a given noetic emphasis may, and in the main does, pass unnoticed, as in the example given above of the common man's notion of objects in the outer world; in fact, were there space it would be easy to show that the greater the degree of realness of a given psychic emphasis, the less does it tend to claim our attention and become an object of reflective thought.

Sec. 7.—Passing then to the question whether we are able to will to believe, it seems clear that the very opponents of this view prove our contention. They are persons for whom, as Professor James puts it, 'only truth as technically verified' is of interest; they listen only when they can gain the satisfaction attached to the appreciation of the fact that their beliefs can be verified by clearly defined ratiocinative process. And, surely, in this throwing off of all influences of tradition and habit which guide the belief of the common man, they will to disbelieve in the value of these influences as valid data, while willing to believe in their clearly worked-out logical formulæ.

Sec. 8.—As I have said above, the realness of a noetic emphasis is usually overlooked. Only where there occur incompatible emphases, as described in Section 4 above, does the question of the realness of a presentation occupy attention. Here the development, as stable or real, of either of the incompatibles is at once inhibited by the other; and this is the state of doubt. This doubt may be aroused by the merest momentary questioning, and may instantly disappear as the realness of one of the incompatibles overwhelms all opposition; or the doubt may persist for a considerable period and be finally replaced by the stable development of one of the incompatibles. But the recognition of the establishment of this realness, which constitutes the state of belief, never appears except as following the deadlock of a state of doubt in which two incompatibles display an equal measure of realness or unrealness, as we may choose to call it.

The breakdown of this doubt may be due, as we have seen, to a gain in the inner efficiency of one of the two incompatible emphases; perhaps, *e. g.*, some new favorable argument appears to uphold one position as against the other; and in such cases the emphasis becomes so important in itself that no effect of the Self as explicit in the empirical ego of self-consciousness is given.

In the main, belief is a subject of remark only where the deadlock of doubt is continuous for some measurable time. In such cases the period of doubt is prolonged without any gain of inner efficiency by either of the incompatibles; both seem equally forced upon us for the time. Then the doubt remains until it is resolved in a clearly self-

conscious state, when the influence of the empirical ego breaks the deadlock, and I say, 'I believe.'

But evidently, if our general view is correct, even where not explicit, the influence of the Self in belief must always be implicit. In some measure the Self must welcome and reject and have to do with the stability or realness of that which is welcomed. Belief must always involve Will. If I understand him correctly, it is this fact which Professor James expresses when he writes, 'Will and Belief . . . are two names for one and the same psychological phenomenon.'

Most interesting in this connection is the fact disclosed by Professor B. L. Gildersleeve's investigation of Greek syntax in relation to the natural expression by the Greeks of their mental experience in this regard. Professor Gildersleeve puts it thus in a private letter which he allows me to quote: "The infinitive after verbs of creation, will and endeavor, is the earliest use of the dependent infinitive. Saying and thinking come afterwards by a manner of adaptation. First *Wille* then *Vorstellung*. This is shown with great distinctness in verbs of belief—belief which is originally forth-putting of the will. . . . The negative after verbs of belief is so steadily the negative of the will, that when we find the other negative we feel that the belief has faded out."

Thus it appears that, whenever we experience a distinct belief, we experience the establishment of realness by the efficiency of the Self, as this is explicit in the efficiency of the empirical ego which is a simulacrum of the Self. In other words, whenever we believe we will to believe.

If the views presented in my 'Instinct and Reason' are correct the Self which thus wills is the psychic correspondent of a vastly complex system which throbs as a unit, but which is not differentiated by the emphatic activity of any of its parts. When, therefore, there arises from within the complex system an influence which determines an act of will, this influence is due to the existence of instinctive tendencies of the most fundamental character, which act, without telling us (by attracting our attention) that they are acting. This unobtrusive Self is the resultant of our inheritance from the ages, it tells of the experience of all our human and pre-human ancestors. If it breaks the deadlock of doubt by determining an act of will, it, in that fact, raises objections from racial experience to the notion which is overthrown in the willing to believe. It says to us, "the elements which are present in the field of attentive consciousness represent but a paltry array of experiential effects. I, who am the resultant of the experiences of the ages, judge that the emphasis in the field of attention whose realness I overthrow has a

dangerous outcome. It is, indeed, impossible to place my objections in the field of attention in ratiocinative form; but my experience from the vast æons of time leads me to see that the realness is on my side, that the form of that which appears in the field of attention must be modified if it is to accord with this racial experience."

All this discussion evidently relates to the establishment of realness, and, as such, is a problem of psychology; and it as evidently is quite apart from questions as to the basis of reality, which is a problem of metaphysics. I can not but feel that much obscurity is brought into the discusion of the subject before us by a failure to keep clear in mind this distinction between the realness of psychology and the reality of metaphysics;[3] the latter, as a concept, has from a psychological standpoint more or less of realness.

III

Sec. 9.—We may turn now very briefly to the question as to the morality of willing to believe. Evidently under the view taken above, the problem here is merely a special form of the general moral problem, and is to be determined by the same criteria that guide our judgment as to the ethical worth of all acts of willing. There are three cases of interest where will appears clearly as influencing belief; and these we may consider separately.

Sec. 10.—(1) It frequently happens that doubt discloses a deep-seated realness in connection with some conception, and we find ourselves resisting the influences which would disturb this realness. To claim that all such willing to believe is in itself immoral would be manifestly absurd. It is generally held in certain cases to be especially noble to act thus, as, for instance, when a man refuses to believe in aspersions cast upon the character of his trusted friend. In fact, it is a mark of the highly developed man that he does not too lightly change his processes of reaction upon the reception of new or changed stimuli; and the psychic correspondent of the act which enforces this habit of persistence, of avoiding the disturbance of deep-seated 'psychical dispositions,' appears in the willing to believe in this its most usual form.

Sec. 11.—(2) But there are cases where, notwithstanding that some conception has a deep-seated realness, a man chooses to establish in himself (wills to believe in) an incompatible conception. To claim that such action is immoral in itself would be equally absurd.

[3] Compare, for instance, Alfred Sidgwick's review of Schiller's 'Humanism,' in *Mind*, N. S., 50, p. 266, where he says, 'But leaving aside the question how far and in what sense man may be said to create or control *reality*,' etc. (italics mine). Whether Schiller or James ever does mean to imply that the Self can control *reality* I very much doubt; but that they are altogether correct in holding that the Self does control realness I am convinced.

For in many cases a man wills to believe thus because he thinks the belief naturally held is incompatible with some nobler belief which on broader grounds seems incontestable. The scientific investigator is constantly thus contending to overthrow the realness of conceptions which are deeply rooted in his nature by tradition; and no one would claim that in so doing his will act is intrinsically immoral.

Sec. 12.—(3) But there are cases where we have in attention two incompatible conceptions, the realness of which is nicely balanced, and where the balance can not be overthrown by any clear ratiocinative process. In such cases we may allow the doubt to stand. Or the influence of the Self may overthrow the doubt—we may will to believe in one of the two incompatibles, and resist belief in the other. If I understand him, it is the morality, in certain cases, of this form of willing to believe that Professor James has defended, and for which defense his critics have so roundly berated him.

It may be agreed, I think, that where the measure of realness of the incompatibles is nicely balanced it is best for a man to reserve judgment, in case it appears clear to him that this reserve of judgment can make no difference to him in relation to his practical life.

But there are cases where to hold the balance leaves the man cold where his heart should be warm, or stolid where enthusiasm is needful if he is to do his part in the struggle toward the higher life. Then surely morality demands the deliberate dissolution of the deadlock by allowing the Self to make a choice between the two incompatibles, thus determining the belief. For surely it is nothing short of rank cowardice to refuse to take sides in the contests of life merely because we can not be sure which side will win. It is worse than that; it is a deliberate and immoral choice of reserve of judgment, when we perceive that such reserve curtails our activities in directions which we feel in the depths of our being to be of the 'nobler' type. To be sure, we may perchance choose the losing side; but even so we shall be no better off in the end if we remain inert, and it is clearly the part of the courageous man to be willing to incur such risk of failure, in the interest of that forcing to their issues of divergent opinions which will the more quickly put their validity to the test of experiment.

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THE PROCESS OF 'REINTERPRETATION' IN THE HEGELIAN DIALECTIC

IF we examine Hegel's treatment of the categories of quality, we notice two apparently different kinds of movement. There is first a main movement through three categories, being (indeter-

minate), its opposite, determinate being, and their synthesis, being-for-itself. This would seem to exhibit directly the dialectic process by thesis, antithesis and synthesis. But the movement through these three categories is not purely one by simple triadic steps. The second category, determinate being, is not reached by the direct negation of being (indeterminate), but by means of a series of intermediary categories. The question, therefore, at once presents itself whether this second movement through intermediary categories is itself strictly dialectical, that is, an advance by the pure power of the negative. The object of the present paper is to show, first, that while this intermediate movement seems undialectical, it is in reality not so; and second, that it is Hegel's safest mode of logical procedure. In the third place, it will be shown that, notwithstanding this relative safety, the intermediate movement brings to light the process in logical dialectic which is perhaps the main source of error in deductions of the categories.

If we examine the logical advance through the categories of quality, we see that it is as follows: Pure or indeterminate being (the adjective 'indeterminate' is, of course, anticipatory) finds its negation in nothing (*Nichts*); and the synthesis of these is becoming. Thus far the movement would seem to be by thesis, antithesis and synthesis. But now that the category becoming is reached, if this strict triadic process is to continue, we shall expect to find this last category posited as the new thesis, and in the very act of being posited to involve its negation and consequent sublation. That is, the movement should be (1) becoming, (2) opposite of becoming and (3) synthesis of these. But this is not the actual movement. Instead of allowing becoming to call forth its opposite, Hegel turns the category back upon itself and forces it to subject itself to a severe introspection. The category goes within itself and analyzes its contents into their constituent factors, and then, finding that *these inner meanings* are opposites, it pronounces *their* synthetic union.

Let us examine this intermediate movement somewhat more in detail. We may suppose Hegel to have completed the first triad and to have found that being and nothing are moments of becoming. But so soon as we make this statement about the content of the synthetic category we find that it is not quite accurate. Being and nothing *are* being and nothing *only before they are seen to be* moments of becoming. So soon as they are recognized as not independent meanings but as mutually related phases of becoming, they are no longer just being and nothing; they are themselves becomings, and are distinguished only, so to say, by the 'direction' of their becoming. Or, to put it into stricter logical terminology, being and nothing are first held as pure disparates; then it is seen that they

can exist only as mutually referent. When this mutual reference becomes explicit they are recognized as moments of a concrete category which expresses their relativity. But now after their sublation by this concrete category, they are no longer just being and nothing, as they were when they were regarded as pure disparates. Each of them now is invested with *express* relativity, and so neither of them can rightly be given its former name of being or of nothing. The process of sublation, in brief, has not only *put the two together,* but has *changed* them.

Now this change of factors is of supreme importance in the logical dialectic. If we overlook it we lose sight of the significant fact that the synthesis is always more than an aggregating of elements. Hegel is well aware of this factor of change and of the consequent need for a continual *reinterpretation* of the elements that enter each synthesis. Hence being and nothing are now new meanings; in his metaphorical and, unfortunately, misleading terminology, they are both becomings, exhibiting in their movement the distinction between a becoming from nothing to being, that is, an arising, and from being to nothing, that is, a ceasing. Expressed in more strictly logical terms, we ought perhaps to say that each, now, is not simply a moment of a category of relativity, but each is itself expressly a category of relativity, the distinction between them being the difference of reference necessarily present where two factors are related.

When we reach *Daseyn,* which is the synthesis of being and nothing as they are transformed into arising and ceasing, the same process of reinterpretation continues. Arising and ceasing have, to be sure, their synthesis in *Daseyn,* but they are arising and ceasing *only before the synthetic category is known.* So soon as they are seen to be moments of this category of first definiteness, they lose the mere vagueness and unstable flux which they exhibited in becoming—or, in logical terms, their *pure* relativity—and take on the definiteness of their synthesizing category. An arising that is a *definite arising*—a *Daseyn*—is no longer pure arising, but arising with the added notion of definiteness; and this is reality (*Realität*), that is, that which has barest but definite claim to affirmation; and as opposed to *Realität* is negation. But here we have two deepened opposites that must themselves be synthesized, and the result is a deepened category. In this new category, instead of the very slight definiteness of *Daseyn*—just there-being—we have the sharper definiteness of something (*Etwas*). Now reality and negation have been sublated into moments of the category something; but again, they are such only *before* they are seen as *Etwas.* When to the category *Daseyn,* whence they first emerged, is added the

sharper definiteness of *Etwas,* this same definiteness is added to reality and negation. It is now of the character of a limit, and reality and negation become being-for-self and being-for-other, the definite limiting references of every something.

And so we might go on through the list. We have made no attempt here to justify Hegel's advance from category to category, but have tried simply to point out his peculiar mode of treatment. All through the Logic we should see that Hegel's procedure is as we have shown it to be in these first steps—a constant reinterpretation of the sublated categories. These enter each higher category by one door and make their exits by another; but meanwhile they have been touched with a magic wand and come forth transfigured.

The Logic, then, is not the simple and direct process by affirmation, negation and synthesis that one would easily suppose. Between the main steps of the triadic movement are a number of subsidiary movements which are not rightly triadic. For while each of these subsidiary movements exhibits a synthesizing of opposed factors, the opposition upon which the synthesis is based does not, as in the typical dialectical triad, arise out of the pure positing of a thesis, but, rather, out of the restating, in a new light of a previous antithesis. In this sense the whole Logic might be said to be an attempt to solve the first opposition. Thus we would seem to find here a logical movement of synthesis of opposites based upon reinterpretation.

We have to ask, then, whether Hegel really abandons his dialectical method in departing from the direct triadic form of movement. Does he fail to fulfill his promise to allow the advance of the Logic to proceed solely by the power of the negative?

We must first ask what Hegel may legitimately mean by a movement by the power of the negative. Hegel certainly holds, and rightly, that the function of the negative does not lie in the mere calling forth of the opposite of a thesis; nor does it consist in the solving of the opposition by the simple putting together of the two conflicting meanings. Neither of these processes would ever yield a logic. But as we ordinarily regard the word, these would seem to be the only possible ways in which we could have a movement by the power of the 'negative.' Obviously, Hegel means something unusual by the term 'negative,' a meaning that is best expressed in his own way by calling the ordinary negative 'abstract' and his dialectical negative 'concrete.' For Hegel, the negative is not simply excludent. It seems to be so at first blush; and this first blush is the timid second step of the triad—the abstract negative. But as soon as it bravely avows its negativity, it at once involves the *inclusion* of the meaning of the rejected term. Hence the concrete

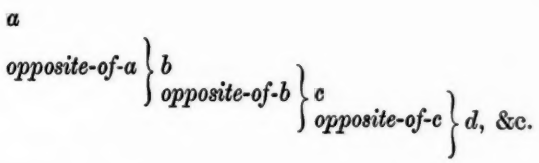
negative is always richer than the positive. But so soon as this is granted, the negative is seen to be a *synthetic* term. And hence it follows that the concrete or dialectical negative is not the second step of the triadic movement, but the third. Hegel explains the nature of the dialectical negative in his larger Logic:[1] "The one thing essential in order to make possible the real logical advance . . . is the knowledge of the logical proposition that the negative is at the same time positive, or that contradiction or self-opposition does not result in nullity or in abstract nothingness, but merely in the negation of its *particular* content—in other words, not in complete negation, but only in the negation of the definite thing. Thus it is a definite or determinate negation. It follows, moreover, that the result of the negation contains that from which it proceeds—which, indeed, is tautologous, for otherwise the result would be no *result*, but a pure immediate. In so far, then, as the result, the negation, is a definite negation, it has *content*. Thus it is a new conception (*Begriff*), a higher, richer one than that which it has negated; for it has become richer just through this negative activity, holding thereby the negatived positive and also its opposite in the unity of itself. It is in this manner that the system of conceptions must build itself up and complete itself, proceeding unhaltingly, ever in the medium of pure thought, and ever immanently."

In this sense, then, all movement by the power of the negative is synthetic movement. Let us now examine the character of Hegel's synthesis by negation and ask whether the process of reinterpretation that we have noticed either contradicts this or is introduced gratuitously. In no case may a dialectical synthesis be simply a summation of opposites; it is always a sublation of them into a meaning that is more than their simple aggregation. Thus becoming is not being plus nothing, but being and nothing as necessarily interrelated phases of a unitary meaning. This very factor of interrelated meaning, however, is just what was not present when each was held as independent; hence, so soon as being and nothing are recognized as sublated they are *ipso facto* recognized as changed. Thus, in fact, these sublated categories *must* be reinterpreted if the result is to be accepted as truly synthetic, that is, as truly the third step of the dialectic process.

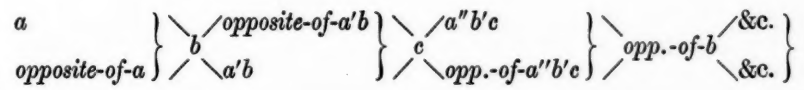
Two paths are now open to the dialectic. It may proceed throughout by the direct triadic movement of thesis, antithesis and synthesis, in which case its second triad will be developed by taking the synthesis of the first triad as the new thesis, meanwhile implicitly carrying over into this new thesis the changes involved in the process of sublation. So, likewise, the third triad would take for its thesis

[1] *Werke*, iii., p. 38.

the synthesis of the second triad, again holding implicitly the alteration of meanings. Or, on the other hand, the dialectic may develop *only one* direct and unmediated triad, the first, and finding that the third step of this triad has altered the meanings of the initial antithetic factors, it may state this change in a new antithesis, this new antithesis being simply the old one with the translation of meanings effected by the sublation definitely expressed. Then it will of necessity be compelled to reconcile this new opposition, only to find that it has again altered the old meanings, and so will be compelled to restate the opposition in translated form. It may go on with this process of reinterpretation to the very end. The first method would be symbolized:



while the second would be represented as follows:



The second is Hegel's typical procedure. The first antithesis is synthesized in *b;* but now, instead of taking at once *opposite-of-b,* the initial antithesis *a* and *opposite-of-a* is allowed to reappear in a reinterpreted form as *opposite-of-a'b* and *a'b.* The factors of the first antithesis have passed through the refracting medium of *b,* and so the new antithesis finds the *b*-meaning involved. The symbol of priming indicates that the change of meaning is not one involving simply the addition of the meaning *b,* but rather a real change of *a* brought to pass by its sublation in another meaning. The new antithesis, however, may not stand, and so passes into a new synthesis; but here again the original opposition breaks out in a still further translated form. This again is synthesized, and so the movement continues. From beginning to end it is seen to be a constant attempt to solve the first antithesis.

In view now of the synthetic meaning involved in the completing step of the dialectic, I think it will be easily admitted that this second method of advance by reinterpretation does not introduce any factor not provided for by the power of the negative. Reinterpretation is definitely called for by the dialectic of the negative just because synthesis *means* reinterpretation. This second method differs, in fact, from the direct triadic method chiefly by its greater

explicitness as to the changes of meaning undergone. For example, if Hegel had taken becoming as his new thesis, he would have made no precise statement of the alterations that had occurred in being and nothing. To be sure, the change would be implicit in the new category, but the very fact that no explicit statement of the new meaning was given would open the possibility that the explicitness might not be rightly apprehended. This possibility would increase as the dialectic proceeded. Each synthesis would be more complex and would call for a wider reinterpretation. And yet, if we simply took the synthesis as the new thesis we should have to trust to seeing all this new meaning at a glance. Obviously we could not trust ourselves far along this line.

Thus, not only is it true that Hegel's procedure by reinterpretation is fully justified as a movement by the sole power of the negative, but it is far less open to error than the movement by direct triads. We have indicated in the symbols how from the first synthesis *b*, the movement of reinterpretation finally, by intermediate stages, brings to light the *opposite-of-b*. This *gradual* educing of the opposite is constantly in evidence in Hegel's Logic, and is obviously of more value than the abrupt statement of the opposite of any synthesis so soon as that synthesis is made good. The latter procedure would find us unprepared for the full significance either of the antithesis or the thesis. For this reason we must, I think, pronounce Hegel's method of reinterpretation more valuable than the method by unmediated triads. In the light of it, too, the logic is, *in form*, an unbroken development of meaning from beginning to end.

While, however, we have thus concluded that Hegel has taken the safer path in the deduction of the categories, it is important to note that the process of 'reinterpretation' of each categorical stage is that factor in the Logic in which lie its greatest uncertainty and risk of error. A dialectical opposite not only opposes, but changes, initial meanings. As the Logic proceeds, the factors to be changed become immensely complex; and from this increasing complexity follows the increasing possibility, at each stage, that the necessary changes have been either not completely or not rightly made. The second possibility involves the graver danger. Its presence is affirmed by the many doubts cast even upon the very first steps of the Logic. Hegel's curious movement from becoming to determinate being through ceasing and arising has been opposed just on this ground, that while becoming *has* changed the meanings of being and nothing, it has not changed them in the manner that Hegel supposes. So, likewise, with the passage from determinate being through reality and negation. The accusation so often made

against Hegel, that he forces the advance from certain categories to others, is really the criticism that he has made erroneous reinterpretations. This is, in fact, what Hegel would call the logical sin of 'external reflection.' A clear recognition of this factor of possible error is an effective antidote for any too ready belief in the infallibility either of Hegel's dialectical procedure or of any attempt to make a systematic deduction of the categories. For every such deduction, if it is to be other than an aggregating of mechanically related factors, that is, if it is to involve *synthetic* relations, must provide, at each stage, for a reinterpretative change. But here is the Achilles heel of all deductions.

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DISCUSSION

IDEALISM AND REALISM

I. THE PHYSIOLOGICAL ARGUMENT

DR. MONTAGUE'S acute and interesting paper in this JOURNAL for May 26 entitled 'Two Recent Views of the Problem of Realism' affords me an opportunity, of which I am not sorry to take advantage, to offer some remarks on two aspects of the question, namely, the physiological argument for idealism, and the nature of the distinction we all of us make between the physical object and the mental state by which we perceive it. In the course of his article Dr. Montague states my position and certain of my arguments in a form which I can not accept. He is led to do so, in my opinion, by a certain peculiarity and, as it seems to me, confusion in his own conception of the problem, which I shall try to point out. He agrees with Dr. Alexander[1] in holding that the physiological argument involves a contradiction, being valid only on the presupposition of that reality of the physical world which it sets out to disprove: I hope to show that the physiological argument can be stated in a form in which it will not be open to this criticism. He opposes my 'psychophysical idealism,' as he calls it, to the 'naïve realism' of Dr. Alexander:[2] I hope to show that these theories are not so opposed as they

[1] See Dr. Alexander's article on 'The Concept of Consciousness' in this JOURNAL for March 3.

[2] Neither of these phrases seems to me well-chosen. What I in 'Why the Mind has a Body' call 'psychophysical idealism' is a theory, not of the nature of matter, but of the relation of mind and body; the theory, namely, that the brain-process is the phenomenal symbol of the mind. For my theory

at first sight appear; that Dr. Alexander's theory, so far as it is tenable, is only another side of mine; and that it is neither so naïve nor so realistic as Dr. Montague conceives it as being.

Dr. Montague says that I 'limit the scope of immediate or direct perception to the states of the psychophysical organism,' and that I even consider this 'axiomatic.' He says that Dr. Alexander and I agree in assuming that the sensible qualities of which we are immediately conscious must be 'either exclusively outside or exclusively inside the psychophysical organism.' What are we to understand by 'the psychophysical organism'? The phrase is none of mine; I never inquired whether sensible qualities were outside or inside anything but the mind. Now, I know what the physical organism is, and I know what the mind is, but a compound of the two, formed by putting the mind and the physical organism together, much as one might put together a feeling of amusement and a piece of india-rubber, seems to me a very curious thing to ask whether sensible qualities are inside or outside of. Is not the first essential of clear thinking on this subject to keep the mind and the physical organism carefully separate, and to realize always with regard to which of the two the question of 'inside' and 'outside' is asked?[3]

The fallacy that must result from not keeping them separate appears in Dr. Montague's arguments for what he calls 'the psychophysical theory of perception.' He says: "If I am real I am somewhere. . . . How can I conceive a thing that is at a distance from me making itself known to me, causing in me a perception of it, without projecting itself through the intervening space in the form of an effect on my organism? If I do not perceive the effect of the fixed stars upon my organism, if I perceive the real stars themselves, I and they must interact at a distance, *i. e.*, must be in two places at once. . . ." Evidently here the pronoun 'I' covers the confusion of the mind with the body. The 'I' that must needs be somewhere in order to be real (if indeed it be the 'I') is the body. This, truly

of the nature of matter 'idealism' simply is a sufficient designation; the fact that I support it in part by the physiological argument does not make it 'psychophysical' in its essential assertion. Why, on the other hand, I think Dr. Alexander's realism not truly 'naïve' will appear in the second portion of this article.

[3] The better to succeed in this, I have in 'Why the Mind has a Body' substituted for the ambiguous word 'external' the terms 'extra-mental' and 'extra-bodily,' after first carefully explaining that the former is not to be understood in a spatial sense. It still seems to me that these terms are admirably suited to their purpose. Is there anything more scandalous than the ambiguity of that stock phrase, 'the external world'? I ask any reader to say whether, on hearing this phrase, he at once knows whether the externality intended is to the body or to the mind.

enough, can not be in immediate relation with distant objects such as the stars, but can be connected with them only by a long series of causes and effects. The 'I' that perceives the stars, on the other hand, is the mind, and to this no similar disability applies. We do in fact, perceive the stars immediately and directly. To urge the necessary physical intermediaries between the two in proof that we do not is, first, to contradict the plain facts of consciousness, and secondly (as Dr. Montague rightly sees), to make it impossible we should ever directly perceive any extra-bodily object at all. Dr. Montague, of course, tells us that what he immediately perceives is certain events within his body; I congratulate him on this, as it seems to me it should qualify him to be a better physiologist than I, with my merely externally directed vision, can ever hope to become.

Dr. Montague's point about the necessary *time*-disparity between distant objects and the brain-events that accompany our perception of them—that these objects are distant not only in space, but in time—is a very clever and important one, though it does not prove what he takes it to prove, that the objects we immediately perceive are events within the body. The time needed for light-rays to pass from the object to the eye and call forth the organic process to which perception corresponds has this result, that we perceive a slightly earlier state of the object than that which coexists with the perception. Where the object is near at hand, the difference of time is so slight as scarcely to reveal itself in practice, and to have escaped the attention of most theorists. Dr. Montague's device of taking the case of the stars magnifies this slight difference, as it were, with a microscope, till it assumes immense proportions. The starlight I see left the star years and years ago. But do I then really see the star itself at all?

In considering this question, it is important to bear in mind that there is no middle ground between our perceiving the star itself and perceiving merely events within the organism. Admit that we do not perceive the star itself, and by precisely the same process of reasoning you will be forced to admit that we can not directly perceive an object near at hand, such as a tree. Now, I know of but one way of determining what we perceive and what we do not perceive, and that is to consult the facts of consciousness. When I do so, I find that what I perceive is *not* an event within my body, but an object outside it, a tree or a star. For *what I mean* by a tree or a star—the 'impression' to which this 'idea' corresponds, to use Hume's terms—is something of which I am immediately conscious. You can not, therefore, in the endeavor to adjust the facts of experience to one another, be led to the conclusion that objects are *beyond* that of which you are immediately conscious, without having

lost contact in some way with the firm ground of experience from which you set out. I am far from denying that there is an apparent antinomy here, which it is the business of a theory of perception to clear up. The beauty of the panpsychist theory is that it enables us to clear it up quite completely; to show how it is possible that we should perceive extra-bodily objects immediately, and yet that our perceptions should be directly correlated with brain-events.

Grant, of course, that there is such a thing as the 'psychophysical organism'—that the brain is real independently of consciousness, and that consciousness is either enclosed within it or somehow outwardly attached to it—and the conception of Dr. Montague immediately follows. Dr. Montague deserves credit for being perfectly logical here. But I think he commits himself to an unnecessarily crude method of statement when he takes up the defence of the view that consciousness is 'confined within the skull.' Even if it were true that the objects of which we are immediately conscious are events within the body, it would not follow that consciousness is 'confined within' the body. Consciousness is not in space, and it can not, therefore, be either inside or outside the body. Dr. Montague thinks that Dr. Alexander is not successful in refuting the notion that consciousness is 'enclosed within the skull.' In my opinion he is only too successful. His success is so great as to blind him to the fact that there is another relation between consciousness and the brain which he has not refuted, and which has a direct bearing on the problem of perception. For, quite independently of any view as to the mode of existence of matter, *it is an empirical fact* that our perceptions are conditioned on and vary concomitantly with brain-events. *It is only on a realistic theory of the mode of existence of matter,* as I shall go on to show, that this fact involves the consequence that they can not vary directly with, and so be immediately cognizant of, extra-bodily objects. If Dr. Alexander, instead of travestying the fact of correlation, of putting it in a shape in which it could occur to no idealist to hold it, would set himself to prove, either that our perceptions do not vary directly with brain-events, or that this fact does not, on a realistic theory, prevent their varying directly with and so being immediately cognizant of extra-bodily objects, he would have a somewhat more difficult task on his hands than that which he has actually attempted.

It is instructive to note the different attitudes of Dr. Montague and Dr. Alexander, as realists, toward the fact of correlation. Dr. Montague accepts this fact, and is led by it—with perfectly valid logic, as a realist—to the monstrous conclusion that the objects we immediately perceive are events within the body. He fails only to see that he has made this conclusion inevitable by conceiving the

correlation in a realistic sense. Dr. Alexander, to avoid coming to so impossible a conclusion, can see no recourse, as a realist, but resolutely to shut his eyes to the fact of correlation. Hence his opinion that the wise course for metaphysics is to have nothing to do with facts of physiology which, if she considered them, might lead her in a wrong direction; that if she considers them she is condemned to a 'sorry course,' a 'loss of wind,' etc. Dr. Alexander's fundamental difficulty is a rooted inability to conceive the fact of correlation otherwise than in a realistic sense.

But the fact of correlation does not necessarily imply any particular theory as to the mode of existence of matter. I have sometimes tried to state this fact in such a way that it should be clearly seen not to involve any particular metaphysical theory. This may be done by saying that, when the extra-bodily object is an actual perception, the brain-process is a possible perception. Or, better still, it may be done in the following way. Any possible perception may be conceived to have become an actual perception. We may, therefore, conceive the brain-process to be actually perceived. Suppose that I am conscious of a large field, containing many other objects and processes, and among them the brain-process. A peculiar difference would then be noted between the brain-process and all other processes. Arrest any other process, and in place of the perception of the process going on you have the perception of the process arrested. That is, the masses and molecules which before were moving are now perceived at rest. Arrest the brain-process, and in place of the perception of the brain-process going on you do not have the perception of the brain-molecules at rest, but *you cease to have any perception at all*—your consciousness is extinguished.[4]

We have now reached a point where I can explain myself with regard to the validity of the physiological argument with some chance of being understood. Dr. Alexander considers, and Dr. Montague agrees with him, that this argument involves a contradiction. "The amazing thing about this argument," says Dr. Alexander, "is that any one could fail to see that it is based upon the tacit assumption of knowledge of that very extra-conscious world the possible existence of which it is so strenuous to deny." I assume that by 'extra-conscious world' he means a world of *matter* existing independently of the mind; for if he meant a world of things-in-themselves, I should fully admit the point, but it would not justify

[4] This account of the facts is, I think, accurate except in a single point. Your consciousness would be extinguished, not at the precise moment when your brain-process came to a stop, but a moment or two before. Those who have grasped the panpsychist theory of the relation of mind and body will see why this must be so.

him in his contention that the physiological argument involves a contradiction.

In reality, what the physiological argument rests on is the fact of correlation, and not the realistic interpretation of that fact. I can quite understand the difficulty which realists must have in grasping this distinction, or at least in seizing quickly the intent of those to whose reasoning it is vital. It is one of the inadequacies of human speech that you can not speak of a stimulus calling forth a brain-event and of the brain-event being accompanied by a perception without being thought to assert that these physical events have reality apart from the perception, or apart from any perception. Certainly I never meant to base the argument on this realistic assumption, but on the facts themselves in the sense in which every one must admit them to be such.

Let me now restate the physiological argument, and try to make the exact force of it plain. This argument is not so much a direct proof of idealism as a disproof of naïve realism. It disproves naïve realism by showing that this theory is in hopeless contradiction with the facts of physiology. According to naïve realism, the tree I see is a reality external to my mind. But, if this is so, it follows that the brain-event which accompanies my perception of the tree is a reality external to my mind. Now, in order that I may correctly perceive the tree, my perception must vary with the tree, and with the tree alone. But the facts of physiology prove that my perception varies with the brain-event, and with the brain-event alone. Hence, if physical objects are realities without the mind, it is impossible, consistently with the facts of physiology, that we should have direct perception of them. The physiological argument is thus, in its exact force, a *reductio ad absurdum* of naïve realism. Whereas, if we take the tree and the brain-event simply as phenomena, there is no difficulty whatever in that correspondence between the phenomenon we call a tree and the phenomenon we call a brain-event which we actually find to be a fact.[5]

To put the same thing in another way: the physiological argument starts from the fact of correlation, and asks whether it is more reasonable to interpret this fact in a realistic or in an idealistic sense. To interpret it in an idealistic sense is to assume two phenomena, perception-of-tree and perception-of-brain-event (the latter merely

[5] This, I gladly recognize, is the position towards which Dr. Alexander in his really able article shows himself to be progressing. He would have no difficulty in recognizing such a correspondence to be a fact. But it would put an end to his 'realism'; and, when he came to explain it, I venture to think that he would be led beyond the mere phenomenalism which is enough for his intellectual needs at present.

possible), in a relation of correspondence. To interpret it in a realistic sense is to split the first of these phenomena (since the brain-event is not an actual perception) into two things, the tree on the one side and the perception on the other; and you have then three things to deal with: the tree, the perception of the tree, and the brain-event. You are now in the following dilemma. The perception is shown by the facts of physiology to correspond to and vary with the brain-event. But, if this is so, it is impossible it should at the same time correspond to and vary with the extra-bodily tree, as it is required to do by the theory of naïve realism. How shall we get ourselves out of the difficulty? The true course is not to hold fast to the extra-bodily tree but deny that we have direct acquaintance with it, as Dr. Montague does; for this is to allow your theories to alter facts. It is to recognize that you were wrong in assuming the extra-bodily tree to be without the mind. Instantly the brain-event too ceases to be without the mind, the correspondence between it and the perception becomes a mere correspondence of phenomena, and the difficulty in the correlation of perceptions with brain-events ceases.

To sum up: the argument does not in the least deny that we immediately perceive extra-bodily objects; it only asserts that if those objects are realities without the mind, then the brain-event too is a reality without the mind, and the facts prove that our perceptions vary with the latter and not with the former. Whereas, if extra-bodily objects are merely mental modifications, there *is* no object, real apart from the perception, to which the latter is bound to correspond, and the correspondence between brain-events and perceptions is simply a correspondence between one mental modification and another. Otherwise put, the perception has not any longer *two* things, the extra-bodily object and the brain-event, to which it is bound *per impossibile* to correspond, but the 'object' is only another name for itself, and the only thing to which it is bound to correspond is the brain-event.

I hope I have now succeeded in vindicating the physiological argument from the charge of involving a contradiction, and in showing that it is a valid refutation of the naïve type of realistic theory. This, however, is not the last word of the matter. Dr. Alexander is not wrong in thinking that the physiological argument implies the extra-mental reality of something which is the cause of our sensations, though he is wrong in thinking that it implies the extra-mental reality of matter. When, in obedience to this argument, we have recognized that matter has no existence apart from our sensations, we have merely *formulated* the facts of perception, but we have not *explained* them. The argument leaves us with a phenom-

enal tree somehow conditioned upon and varying with a phenomenal brain-event. The lazy phenomenalism which is so popular at present is content merely to register this surprising fact. In reality it is a datum for metaphysics, an *explicandum*, and the test of the soundness of any metaphysical theory is its ability to explain it. The impotence of realism shows itself nowhere more clearly than in its total inability to do this. And no wonder; for, make the body a reality external to the mind, and their conjunction is bound to be an ultimate and inexplicable fact. Idealism, on the other hand, paves the way for the panpsychist explanation. To state that explanation in a word: the phenomenal relation between the extra-bodily tree *quâ* physical and the brain-event is the symbol (in mine or any consciousness) of a real relation between the thing-in-itself that appears as the tree and the tree *quâ* perception. If thinkers who at present stand helpless before the relation of mind and body, and are driven by the facts either to the denial that we ever perceive extra-bodily objects at all, or to a position which amounts to the denial that mind and body are related—if these thinkers would devote a little more attention to the panpsychist theory, I am convinced that they would find nine-tenths of their difficulties disappearing.[6]

I shall take up the question of the nature of the distinction between the physical object and our perception of it in a later instalment of this article.

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REVIEWS AND ABSTRACTS OF LITERATURE

Les Principes des Mathématiques: I. Principes de la Logique. L. COUTURAT. *Revue de Métaphysique et de Morale,* January and March, 1904. *Kant et la Mathématique moderne.* L. COUTURAT. *Bulletin de la Société française de Philosophie,* May, 1904. *Les Principes des Mathématiques d'après M. Russell.* G. MILHAUD. *Revue Philosophique,* March, 1904. *L'Objectivité intrinsèque des Mathématiques.* P. BOUTROUX. *Revue de Métaphysique et de Morale,* September, 1903.

The papers of M. Couturat summarize the main results of modern logic, defining the concepts and axioms on which exact or mathematical reasoning is based. The general position is that of Mr. Russell's 'Principles of Mathematics,' though the exposition is much clearer than that of Mr. Russell's. This criticism does not go into details, but considers

[6] A good way to begin is to read Professor Royce's essay on 'Self-Consciousness, Social Consciousness, and Nature,' in the *Philosophical Review* for September and November, 1895, reprinted in his 'Studies of Good and Evil'; and Professor Stout's chapter on 'Body and Mind,' in his 'Manual of Psychology.'

only one or two of M. Couturat's positions, in connection with those of MM. Boutroux and Milhaud. M. Couturat, like Mr. Russell, considers logic and mathematics to be fused, if not identified. This fusion occurred in the second half of the nineteenth century, when logicians expressed the syllogism in symbolic form, thus showing that logic is part of mathematics, and when mathematicians, defining their own concepts and axioms, discovered that mathematics is only one kind of exact reasoning among other possible kinds, *i. e.*, is a part of logic. This fusion seems to be one of the most hopeful signs of the times, suggesting as it does that 'quantitative' reasoning has no monopoly of exactness or logical necessity, but that any subject, concept or principle is amenable to exact definition and reasoning, and that there is perhaps no region, even that of the infinite, which is not perfectly intelligible. The perfecting of logical method also restores to conceptual analysis the importance and fruitfulness of which Hegel's barren dialectic method succeeded in depriving it. Against the symbolism of recent logic, however, one frequently hears urged the objection that it does not give any results which the old methods could not reach. But neither does the use of number symbols give any results that we could not get by detailed counting. Symbolism is safer, as well as quicker, just because it is more abstract, as M. Couturat points out. Symbolism is simply a well-constructed highway to the goal of truth, which goal we commonly try to reach by crossing the fields; it has no pitfalls, while the journey across the fields may lead us through many sloughs of confusion, whose mire will cling to us even when we arrive at the goal. When we have learned the 'characteristica universalis' surely we shall reason more safely than now about continua, dimensions, possibilities, and all those swamps across which the high road has not yet been laid. On the other hand, we must object to M. Couturat's description of logic as a 'hypothetically necessary' system. He shares with Mr. Russell, and indeed most logicians, the view that the forms of logic are not observed and copied from the actual world, but are simply ideal constructions. Now against this view we refer to the second and third of the papers above named. M. Boutroux clearly shows, it seems to us, that the mathematical world, though an ideal one, is not a construction of ours but quite objective. And M. Milhaud shows that we should never combine the concepts and the axioms of logic as we do if it were not for the stimulus of intuition. If, now, intuition is objective does it not seem that logic is in part at least a study of the nature of the presented world? M. Couturat, in the fourth paper above named, where he argues against Kant's basing of mathematics upon intuition, does not take account, I think, of this objection. But we can not here enter upon this large metaphysical question. We can and must assert, however, that it is not right for logicians to make the above metaphysical presupposition and then go on with a clear conscience. Another presupposition which needs proof is that the propositional calculus is the fundamental part of logic. Until we have an exact and universally admitted analysis of the relations that make up the proposition—the noun-verb relation, the verb-object relation, etc.—how can we decide whether it is more funda-

mental than the relation of individual to its class? Again, we are told that the number *one* is defined, quite without a vicious circle, as that class composed of mutually identical members. But does not the concept of individual member presuppose the idea of unity? In short, the study of logic must be carried much further than it has been carried. We should analyze all the concepts and relations used in thinking. It is only natural that attention should have been centered at first upon the best polished concepts, those of mathematical reasoning. The science of logic, like that of psychology, is in its infancy. Meanwhile the great merit of writers like the above, besides their unquestioned learning and logical power, is that they have taught us the universal applicability of logic and its fundamental philosophical importance.

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Some Observations on Visual Imagery. H. B. ALEXANDER. *Psychological Review,* July–September, 1904, pp. 319–337, Vol. XI., No. 4–5.

Dr. Alexander divides visual imagery into three grades with regard to vividness, and into two classes according to the relation of the images to volition. He says that his images are externalized, sometimes, indeed, so vividly objectified as to overlie and blot out real sensation, and to make difficult, if not impossible, the drawing of a hard and fast line between sensation and image. His images of most things are isolated and, except in his third class, are smaller than reality, though things really small, such as printed letters, are not reduced. The differences in the three classes are slight for outline, greater for definiteness, more still for substantiality, and greatest for color, luminosity and apparent size. Vividness is proportional to the amount of attention given to the image. Like many other observers, he says that his images, as a rule, are fragmentary. According to the belief of the present writer this is, however, no differentia; for images, as sensations themselves, are just as fragmentary when they are as brief.

Dr. Alexander speaks of (1) 'voluntary or memory images,' and (2) 'spontaneous and irrelevant images.' In a section on 'The Influencing of Imagery' he admits, however, that 'even in the most abjectly servile imagery there is always some spontaneity' (p. 333). In a section on 'Imagery and Ratiocination' he says he believes that visual imagery was probably the mode of thought developed in the course of evolution before the origin of language, and suggests that the visual images are 'mere residual mental organisms pursuing a natural course of degeneration' (p. 336).

Dr. Alexander begins by saying that 'theories as to imagery can not be on sure ground until we have fuller detail' (p. 319), and yet I have been able to count in the 18 pages of his article only 17 experiences that have been described in detail. One could have wished that he had given more of his experiences. As his visual images are of a vivid type, he might, I believe, have told us more about them. A collection of descriptions of his images of other sense qualities, if he has such, would be welcome.

In connection with this article I should like to make a recommendation concerning the use of the term 'memory image.' Dr. Alexander speaks of 'voluntary or memory images.' By memory images he means not only 'simple reproductions,' but 'all images consciously constructed from remembered elements.' He observes (p. 324) that 'many times projected images appear sequent to winking.' It seems to me that to the visual images here mentioned, and to these alone, should be restricted the name 'memory images,' and that a distinction should be made between 'memory images' and 'images' of the 'free' or 'fancy' kind. I have made for my own study the following classification of images: First, *after images,* which 'feel coercive' and behave in a peculiar way; they show negative and complementary phases; second, *memory images,* which also feel coercive but show no phases; they are, however, like after images in being traced or usually traceable to a definite stimulus; and third, the *images,* fainter than either of the others (in my own case, though apparently not always so with Dr. Alexander), and neither feeling 'coercive' nor having phases. These memory images are mentioned by James (I., 647) as called phenomena of *Sinnesgedächtniss* by the Germans. Examples of these are the microscopist's haunting visions of his preparations, the chess-board mentioned by Dr. Alexander (p. 325) and a many times-observed experience of my own in seeing, after a swim in the surf, images of breaking waves, as I was rubbing my face with a towel in the diminished light of the bath-house.[1]

It is true in a sense that all images are memory images. They are resuscitations, either partial or (possibly) integral, of sensations that we ourselves have had; unless we believe that they are inherited from our ancestors through the germ-plasm, a thought which has been several times suggested, but which is corroborated by no facts known to me. Now, if all images are memory images, let us call by that name only those in which the memory element is so noticeable and strong as to make them a class by themselves.

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JOURNALS AND NEW BOOKS

THE INTERNATIONAL JOURNAL OF ETHICS. July, 1904. Vol. XIV., No. 4. *Moral Instruction in Schools* (pp. 401–418): HERBERT M. THOMPSON. – The author argues that it is possible to give school instruction in morals which shall be free from religious or supernatural dogmas, and consequently acceptable to the various schools of religious belief. Sympathy and truthfulness are, he believes, the virtues most important to teach. *Has the Universe an Intelligent Background and Purpose?* (pp. 419–435): JAMES H. HYSLOP. – Whether or not the world has an intelligent purpose and background depends on whether nature cares as much for consciousness as for matter and energy. Unless consciousness can be shown to be conserved (as matter and energy are conserved)

[1] I have also observed a number of instances of auditory memory images.

by the continued existence of individuals, the evidence for a materialistic view is strong. *The Government Prison Settlement at Waiotapu, New Zealand* (pp. 436–444): CONSTANCE A. BARNICOAT. – An interesting account of a prison settlement, in which prisoners, who are not habitual criminals, lead a healthy, outdoor life of productive labor. *The Moral Training of the Young in China* (pp. 445–468): CHESTER HOLCOMB. – A sympathetic discussion of Chinese education and government, showing the predominantly ethical aim of the educational system and the decentralization of the government. *The Practical Reason in Aristotle* (pp. 469–480): F. MELIAN STAWELL. – The author attempts to reconcile the metaphysical and Platonic elements in Aristotle's ethics with Aristotle's distinctively practical and humanistic conception of man's duty. *Student Honor: A Study in Cheating* (pp. 481–488): EARL BARNES. – A study of the answers of students to a questionaire, sent to determine student sentiment concerning cheating, shows that the majority of students would be unwilling personally to report cases of dishonesty, although they admit that to do so would be right. *An Examination of the Rationalistic Attitude* (pp. 488–495): GUSTAV SPILLER. – The rationalist is wrong in so far as he feels that a critical attitude and the pursuit of truth sum up the aim of life; but it remains true that 'the diversity of men's wants makes it imperative that reason shall be called in . . . to decide upon diverging claims.' *The Heart of Mr. Spencer's Ethics* (pp. 496–499): FRANKLIN H. GIDDINGS. – Mr. Spencer regarded the attainment of individual liberty and the destruction of the military spirit as the ends of greatest value to society. *Book Reviews:* Henry Sidgwick, *The Development of European Polity:* GEORGE CLAUS RANKIN. G. L. Duprat, *A Treatise on the Psycho-Sociological Bases of Ethics:* S. H. MELLONE. Inazo Nitobé, *Bushido, the Soul of Japan:* NATHANIEL SCHMIDT. L. Lévy-Bruhl, *The Philosophy of Auguste Comte:* HENRY BARKER. F. H. Hayward and M. E. Thomas, *The Critics of Herbartianism and Other Matters Contributary to the Study of the Herbartian Question:* J. WELTON CARROLL. Alexander Darroch, *Herbart and the Herbartian Theory of Education:* J. WELTON. Carroll D. Wright, *Some Ethical Phases of the Labor Question:* STEPHEN F. WESTON. John Mitchell, *Organized Labor:* JOHN GRAHAM BROOKS. F. C. S. Schiller, *Humanism:* A. R. AINSWORTH. Horatio W. Dresser, *The Christ Ideal: A Study of the Spiritual Teachings of Jesus:* NATHANIEL SCHMIDT.

REVUE DE METAPHYSIQUE ET DE MORALE. July, 1904. Vol. X., No. 5. *L'histoire littéraire et la sociologie* (pp. 621–642): G. LANSON. – While sociology must heed historic literature, the latter does not need the former. The law of the correlation of literature and life is that the literature rather supplements than expresses the life of an age. The laws of 'foreign influence,' 'crystallization of peoples,' 'correlation of the esthetic forms and purposes,' 'of the appearance of a masterpiece' and 'of the action of a book on the public.' *Économie optimiste et économie scientifique* (pp. 643–663): C. RIST. – If we wish to realize the maximum of happiness it is necessary to organize competition in favor of

liberty and publicity. Free competition is not always realizable. *Les principes des mathématiques* (pp. 664–698): L. COUTURAT. – The definition of an irrational number, of a continuum; the concept of quantity; the measure of quantities. *La philosophie scientifique de M. Duhem* (pp. 699–744): A. REY. – M. Duhem rejects Poincaré's position; physical theories are not mere matters of convenience. But the physical laws he arrives at are never stated as derived from real quantities, but as resting on pure mathematics. He stands opposed especially to the old realistic mechanical theories. He gives an Aristotelian emphasis to qualitative differences. *La question de l'École Polytechnique* (pp. 745–754): L. WEBBER. – Reform rather than destruction advocated. *Livres nouveaux.* T. Ruyssen, *Essai sur l'évolution psychologique du jugement.* F. Paulhan, *La fonction de la mémoire et le souvenir affectif.* Braunschvig, *Le sentiment du beau et le sentiment poétique.* J. Sully, *Essai sur le rire.* M. Pelletier, *Les lois morbides de l'association des idées.* Gley, *Étude de psychologie physiologique et pathologique.* J. van Biervliet, *Étude de psychologie.* F. le Dantec, *Les lois naturelles.* C. Pouglé, *La démocratie devant la science.* M. Georges, *Pour la pédagogie.* G. de Pawlowski, *Philosophie du travail.* C. Rappoport, *La philosophie de l'histoire comme science de l'évolution.* C. Waddington, *La philosophie ancienne et la critique historique.* J. Bourdeau, *Les maîtres de la pensée contemporaine.* H. Cornelius, *Einleitung in die Philosophie.* H. Rickert, *Der Gegenstand der Erkenntnis. Einleitung in die Transzendentalphilosophie.* G. Storring, *Moralphilosophische Streitfragen.* H. C. Bastian, *Studies in Heterogenesis.* Reviews and Periodicals.

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NOTES AND NEWS

We are enabled to announce the following list of official secretaries for the several sections of the departments of philosophy and psychology of the International Congress of Arts and Science to be held at St. Louis, September 19–25: *Metaphysics:* Professor A. O. Lovejoy, of Washington University; *Philosophy of Religion:* Dr. W. P. Montague, of Columbia University; *Logic:* Dr. W. H. Sheldon, of Columbia University; *Methodology of Science:* Dr. Ralph Barton Perry, of Harvard University; *Ethics:* Professor Frank C. Sharp, of the University of Wisconsin; *Esthetics:* Professor Max Meyer, of the University of Missouri; *General Psychology:* Wm. Harper Davis, of Lehigh University; *Experimental Psychology:* Dr. R. S. Woodworth, of Columbia University; *Comparative Psychology:* Dr. Robert M. Yerkes, of Harvard University; *Abnormal Psychology:* Dr. Adolf Meyer, of the New York State Pathological Institute.

On Friday, October 28, Columbia University will commence the celebration of the hundred and fiftieth anniversary of its foundation. On that day all the university buildings will be open for inspection. The following Monday morning the corner stones will be laid of four new buildings: the university chapel, two university dormitories, and the School of Mines building. If completed, the new Thompson physical education building of Teachers College will then be dedicated. On Monday afternoon President Butler will address the formal university convocation. Details of other lectures, etc., in which the foreign guests of the university will take part, are to be announced later.

Professor John E. Boodin, of Iowa College, has been elected to the new chair of philosophy at the University of Kansas. Dr. J. D. Stoops (Boston University) will succeed him at Iowa College.

Dr. Edmund J. James, president of Northwestern University, has been elected president of the University of Illinois, succeeding Dr. A. S. Draper, now superintendent of State Instruction in the State of New York.

The Rev. Dr. Charles W. Shields, professor of harmony of science and revealed religion at Princeton University since 1865, died on August 25, at the age of seventy-nine years.

The death is also announced of Christof von Sigwart, professor of philosophy at Tübingen.